WHAT IS CLAIMED IS:

1. A holographic optical recording medium comprising:

a plastic substrate that has a first surface and a second surface;

a first inorganic intermediate layer formed on the first surface of the plastic substrate; and

an organic recording layer in which information is recorded by using holography, the organic recording layer being formed on the first inorganic intermediate layer.

2. The optical recording medium according to claim 1, further comprising:

an adhesive layer formed between the plastic substrate and the first inorganic intermediate layer;

a first transparent resin layer formed between the adhesive layer and the first inorganic intermediate layer; and

a second inorganic intermediate layer formed on the organic recording layer; and

a second transparent resin layer formed on the second inorganic intermediate layer.

3. The optical recording medium according to claim 1, further comprising a reflective layer formed on the second surface of the plastic substrate.

4. The optical recording medium according to claim 1, wherein the first inorganic intermediate layer has a transmittance not less than 90 percent for a recording light used to record information in the organic recording layer.

5. The optical recording medium according to claim 1, wherein the first inorganic intermediate layer has a transmittance not less than 50 percent for a servo light used for a servo.

6. The optical recording medium according to claim 1, wherein the first inorganic intermediate layer has a thickness not less than 1 nanometer.

7. The optical recording medium according to claim 1, wherein the first inorganic intermediate layer has a thickness not greater than 2000 nanometers.

8. The optical recording medium according to claim 1, wherein the first inorganic intermediate layer includes a material selected from a group consisting of magnesium fluoride, calcium fluoride, zirconium fluoride, palladium fluoride, barium fluoride, cesium bromide, cesium iodide, magnesium oxide, aluminum oxide, silicon oxide, titanium oxide, chromium oxide, zinc oxide, yttrium oxide, zirconium oxide, indium oxide, tin oxide, tellurium oxide, cerium oxide, hafnium oxide, tantalum oxide, boron nitride, silicon nitride, aluminum nitride, zirconium nitride, silicon carbide, zinc sulfide, barium titanate, and diamond.

9. The optical recording medium according to claim 2, wherein the second inorganic intermediate layer includes a material that has a transmittance not less than 90 percent for a recording light used to record information in the organic recording layer.

10. The optical recording medium according to claim 2, wherein the second inorganic intermediate layer has a transmittance not less than 50 percent for a servo light used for a servo.

11. The optical recording medium according to claim 2, wherein the second inorganic intermediate layer has a thickness not less than 1 nanometer.

12. The optical recording medium according to claim 2, wherein the second inorganic intermediate layer has a thickness not greater than 2000 nanometers.

13. The optical recording medium according to claim 2, wherein the second inorganic intermediate layer includes a material selected from a group consisting of magnesium fluoride, calcium fluoride, zirconium fluoride, palladium fluoride, barium fluoride, cesium bromide, cesium

iodide, magnesium oxide, aluminum oxide, silicon oxide, titanium oxide, chromium oxide, zinc oxide, yttrium oxide, zirconium oxide, indium oxide, tin oxide, tellurium oxide, cerium oxide, hafnium oxide, tantalum oxide, boron nitride, silicon nitride, aluminum nitride, zirconium nitride, silicon carbide, zinc sulfide, barium titanate, and diamond.

14. The optical recording medium according to claim 1, wherein the organic recording layer includes a photopolymer.

15. A method of manufacturing a holographic optical recording medium, comprising:

forming a multilayered film that includes an organic recording layer that has a first surface and a second surface, a first inorganic intermediate layer on the first surface of the organic recording layer, a first transparent resin layer on the first inorganic intermediate layer, a second inorganic intermediate layer on the second surface of the organic recording medium, a second transparent resin layer on the second organic intermediate layer; and

sticking the multilayered film to a plastic substrate by an adhesive.

16. A method of manufacturing the holographic optical recording medium, comprising:

forming an inorganic intermediate layer on a first surface of a plastic substrate; and

forming an organic recording layer on the inorganic intermediate layer.

17. The method according to claim 16, further comprising:

forming a spacer on the inorganic intermediate layer; and

forming a protective layer on the spacer, wherein

the forming of the organic recording layer includes pouring a material of the organic recording layer between the inorganic intermediate layer and the protective layer to form the organic recording layer.

18. The method according to claim 16, further comprising applying the plastic substrate on a reflective layer on which tracking grooves are formed.

19. The method according to claim 16, further comprising forming a reflective layer on a second surface opposite to the first surface of the plastic substrate.

20. The method according to claim 19, wherein the inorganic intermediate layer is formed after forming the reflective layer.